

Commercial Aviation**Reliability**

ON Monday of this week D.L.H. celebrated the second anniversary of the South Atlantic mail service. The original fortnightly service has become weekly, and machines have crossed no fewer than 143 times without casualty and almost without trouble.

**Replacing the "Golden Clippers"**

FOR the past three years Wibault-Penhoët three-engined "Golden Clippers" have been flying on Air France's Croydon-Le Bourget service. It would seem that these will soon be replaced, since the first Breguet-Wibalt 670, which was described and illustrated in *Flight* of April 25 last year, has now been in the air for some time.

This machine, which has two Gnome Rhône K.14 engines, is an 18-seater, and, with retractable landing gear and v.p. airscrews, it has a top speed of 210 m.p.h. at 6,000 ft. At 4,500 ft., using 62.5 per cent. of the available power, it cruises at 175 m.p.h. The 670 has slotted flaps which are somewhat similar in their action to the rather more accentuated flaps on the Junkers Ju.52's.

**Air France Increases**

EVIDENCE of the steady progress maintained in the public's use of air transport is contained in the 1935 figures which have been issued by Air France. The survey reveals a 29½ per cent. increase in passengers over the 1934 records, a 28½ per cent. increase in mail, and a 25½ per cent. increase in freight. Actually, 62,036 passengers were carried.

A regularity of 98 per cent. was maintained during the year over the whole Air France system, which comprises the European network, the North African lines, the long-distance service to the Far East, and the 9,000-mile Atlantic service.

**By Air to Medina**

AS far back as November, 1933, Misr Airwork sent a machine into the Hedjaz, when one of the company's pilots, Mr. J. Mahoney, flew a D.H. Dragon from Almaza to Jeddah via Tor, Wedjh and Yambo, carrying Talaat Harb Pasha, managing director of the Misr Bank and director of Misr Airwork S.A.E., and party. In December, 1934, two machines, a D.H. Dragon, piloted by Mr. G. S. Brown, and a Fox Moth, piloted by M. Sidki Effendi, were despatched from Almaza to Jeddah by this route.

At the beginning of this year Talaat Harb Pasha and his party left Almaza on Thursday, January 9, in a D.H. Rapide for Jeddah, where they arrived on the same day after flying for 6 hours 33 minutes, stops being made at Tor and Yambo. On Saturday, January 18, the party left Jeddah for Medina, which they reached after a flight of 1 hour 45 minutes. Two days later, on January 20, they flew from Medina via Yambo in 5 hours 40 minutes.

That of 1933 was the first civil flight to the Hedjaz. That to Medina in January was the first civil flight to this Holy City, and it is believed that the machine is the first ever to visit Medina.

**A SMALLER LOCKHEED "TWIN"*****The Type 12 With a Maximum of 231 m.p.h.: Four Models Available***

**I**N view of the success enjoyed by the twelve-seater Electra (more than fifty of these machines are in use, the Lockheed Aircraft Corporation has introduced a new machine—an eight-seater—on similar lines but somewhat smaller.

Aluminium alloy (24 ST) is mainly used for the structure. The fuselage is a monocoque type and the wing resembles that of the Electra. The twin fins and rudders which, it is claimed, made for superior stability and control in the Electra, have been further improved for the Lockheed 12.

Four models are being offered. There is the type 12A, with two Pratt and Whitney Wasp Junior SB's (450 h.p. for take-off and 300 h.p. for cruising); the 12B, with a pair of model R975E3 Wright Whirlwinds (these are intended for low altitude operation and give 440 h.p. for take-off and 300 h.p. for cruising); the 12F, using the smaller seven-cylinder type Whirlwind; and the Model 12M, with two Menasco six-cylinder in-line engines giving 290 h.p. each and 195 h.p. for cruising.

Although the new machine is smaller than the Electra, its fuselage is of approximately the same cross section as that of the larger machine; the maximum width is actually five feet. Aft of the cabin are lavatory facilities and a baggage compartment of thirty-three cubic feet capacity. The cabin is com-

**Still More Air Mail**

THE fact that the amount of air mail has increased is almost ceasing to be news. Increases should be expected. Nevertheless, it is worth recording the fact that during 1935 the total weight despatched amounted to 187 tons, as compared with 122 tons in 1934—an increase of about 54 per cent.

**Germany and the North Atlantic**

DURING this month, it is understood, a German delegation representing the Air Ministry, the Post Office, and D.L.H. will be visiting Washington in connection with a proposed North Atlantic service. These plans appear to have no connection with the experimental airship flight which may be made with the L.Z.129 in due course. Presumably, if a service is contemplated, flying boats will be used with one or more depot ships—as on the markedly successful South Atlantic service.

**Plymouth-Jersey**

JERSEY AIRWAYS expect to inaugurate a new service between the island and Plymouth on April 3. It is also anticipated that the company's private aerodrome on Alderney will be completely ready by Easter, after which calls will be made, on request, at that island by machines on the Southampton-Jersey-Southampton route. Guernsey Airways, a subsidiary company, also hope to recommence their inter-island amphibian service in the near future.

**Towards Scandinavia**

BRITISH AIRWAYS' Scandinavian mail and passenger service will, it is learnt, be inaugurated during the third week of this month, and tentative plans are being made for the first machine to leave on Monday, February 17. One trip will be flown daily in each direction.

The provisional time-table calls for departure from Stapleford Abbotts at 9 a.m., arriving in Amsterdam for an early lunch at 11 a.m., in Hamburg at 1.25 p.m., in Copenhagen at 3.20 p.m., and in Malmö at 3.45 p.m. In the reverse direction, the machine will leave Malmö at 8.30 in the morning, arriving at Essex Airport at 3.15 p.m. During the summer, as already announced, the service will be increased by the addition of a night service in each direction daily.

Although the service will, in some respects, be competing with those of the national air line companies in the countries served, Major McCrindle states that he has made arrangements for British Airways to work harmoniously with them. The national air lines concerned will, in some cases, act as the company's general agents. At Malmö this will be done by the A.B. Aerotransport, at Copenhagen by D.D.L., and at Hamburg by D.L.H.

Commanders W. F. Anderson, D.S.O., D.F.C., the senior pilot of British Airways, and C. M. Pelly have been assigned to the route, which will later be extended to include Stockholm when the new airport is opened. On the Malmö-Stockholm section, incidentally, there will be a regular series of beacons and emergency landing grounds.

**LOCKHEED 12A**

Two Pratt and Whitney Wasp Junior SB: 300-450 h.p.  
Twin-engined Commercial Monoplane.

Span	...	...	...	...	...	...	49 ft. 6 in.
Length	...	...	...	...	...	...	36 ft. 4 in.
Wing area	...	...	...	...	...	...	352 sq. ft.
Weight empty (including equipment and radio)	...	...	...	...	...	...	5,355 lb.
Gross weight	...	...	...	...	...	...	7,925 lb.
Take-off run (2 posl. airscrew)	...	...	...	...	...	...	780 ft.
Take-off run (constant speed airscrew)	...	...	...	...	...	...	600 ft.
Maximum rate of climb at sea level	...	...	...	...	...	...	1,400 ft./min.
Fuel consumption at max. rated cruising power	...	...	...	...	...	...	52 gal./hr.
Cruising range (approx. 60% power)	...	...	...	...	...	...	650 miles.
Service ceiling	...	...	...	...	...	...	24,800 ft.
Absolute ceiling with full load on one engine	...	...	...	...	...	...	10,200 ft.
Maximum speed at sea level	...	...	...	...	...	...	219 m.p.h.
Maximum speed at 5,000 ft.	...	...	...	...	...	...	231 m.p.h.
Cruising speed at 10,000 ft.	...	...	...	...	...	...	209 m.p.h.

pletely soundproofed and embodies a ventilation system similar to that of the Electra.

For airline operation six passengers are carried in adjustable seats; there is a crew of two and storage for 450 lb. of cargo in the rear compartment and in the nose.